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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NI, SUHAN

ART UNIT PAPER NUMBER

2646

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/646,548

Applicant(s)

SAHYOUN, JOSEPH Y.

Examiner

Suhan Ni

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

1. The Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group **Art Unit 2646**.
2. This communication is responsive to the application filed 08/21/2003.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR
DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A
COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program
listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having
more than 50 pages of text are permitted to be submitted on compact discs.) or

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).

"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and

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Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000. Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

(e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

(2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and

preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication, which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations

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to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in at least claim 5. Therefore, the “a first force exerted on the first spider portion in a first direction and a horizontal component of a second force exerted on the second spider portion in a second direction” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112, 2nd Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There are numerous of indefinite limitations in the claims, the examples are:

Regarding claim 1, the limitations of "... said interior surface, said side portion terminating in an exterior edge a uniform height above said interior surface and having a predetermined size and shape with said side portion defining a first connection point spaced therearound ..." in lines 3-5 are indefinite since it is not clear what the limitations are.

Regarding claim 1, the limitations of "...with said outer edge being substantially the same shape as, and a smaller size than that defined by the exterior edge of the frame, with said bottom surface defining a second connection point therearound ..." in lines 8-10 are indefinite since it is not clear what the limitations are.

In claim 1, it recites the limitation of "said second connection point" in line 21. There is insufficient antecedent basis for this limitation in the claim.

...

Since there are too many indefiniteness terms and limitations in the claims, applicant's corporation for thoroughly revising the claims would be highly desirable for speeding up the processing of this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Based on the best understanding of the applicant's claim language regarding the 112, 2nd paragraph rejection as mentioned above in paragraph 3 of this office action, claims 1-10, 13-15 and 18-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Kato et al. (U. S. Pat. - 6,236,733).

Regarding claim 1, Kato et al. disclose a sound radiating device comprising: a frame (5) having an interior surface including a side portion extending upward from and surrounding said interior surface, said side portion terminating in an exterior edge with a uniform height above said interior surface and having a predetermined size and shape with said side portion defining a first connection point spaced therearound that is inward and apart from said exterior edge; a substantially stiff part (8) having an outer edge, a top surface and a bottom surface with said outer edge, with said bottom surface defining a second connection point therearound; a flexible surround (9) connected around and between the exterior edge of the frame and the outer edge of the substantially stiff part with the surround being less stiff than said stiff part; a third connection point (Fig. 1b) defined by said interior surface of said frame inward from said side portion and encircling a center of said frame with said third connection point in substantially a same horizontal plane with said first connection point; a first resilient spider portion connected between said first and second connection point; and a second resilient spider portion connected between said second and third connection points; wherein said second connection point is substantially midway between said first and third connection points, and in substantially the

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same horizontal plane as said first and third connection points when said stiff part is in a static position as supported by said surround as claimed.

Regarding claims 2-6, Kato et al. further disclose the sound radiating device, wherein the first spider portion and the second spider portion each have concentric alternating ridges and valleys; and both of the first spider portion and the second spider portion are connected to the second connection point in a valley of the spider portion (Fig. 3) as claimed.

Regarding claims 7-9 and 14-15, Kato et al. further disclose the sound radiating device, wherein the sound radiating device further comprises: a bobbin (6) having a first end and a second end; a voice coil (7) wound on the bobbin near the Second end; and a magnet assembly (4) mounted centrally to the interior surface of the frame as claimed.

Regarding claim 10, Kato et al. further disclose the sound radiating device, wherein said stiff part has a substantially flat center portion (11) and a substantially V-shaped section surrounded the flat center portion as claimed (Fig. 1b).

Regarding claim 13, Kato et al. further disclose the sound radiating device, wherein the stiff part includes a concave cone (Fig. 6) with a ring concentric with a center of the cone that extends downward from the bottom surface of the cone as claimed.

Method claims 18-23 are similar to claims 1-10 and 13-15 except for being couched in method terminology; such methods would be inherent when the structure is shown in the references.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Based on the best understanding of the applicant's claim language regarding the 112, 2nd paragraph rejection as mentioned above in paragraph 3 of this office action, claims 11-12 and 16-17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (U. S. Pat. - 6,236,733).

Regarding claim 11, Kato et al. do not clearly teach a flat diaphragm as claimed. Since providing a flat diaphragm for a speaker is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to be motivated to provide a suitable flat diaphragm, such as a honeycomb type diaphragm for the sound radiating device as an alternate choice, in order to reduce the thickness of the device for certain application.

Regarding claims 12 and 17, Kato et al. further disclose the sound radiating device, wherein the sound radiating device further comprises: a bobbin (6) having a first end and a second end; a voice coil (7) wound on the bobbin near the Second end; and a magnet assembly (4) mounted centrally to the interior surface of the frame as claimed.

Regarding claim 16, Kato et al. do not clearly teach a center opening on the diaphragm as claimed. Since providing a opening on the diaphragm for a speaker is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to be motivated to provide a suitable opening, such as a centrically circular opening on the diaphragm for the sound radiating device as an alternate choice, in order to reduce the heat generated by the driving coil.

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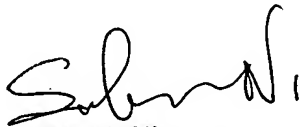
Method claims 18-23 are similar to claims 11-12 and 16-17 except for being couched in method terminology; such methods would be inherent when the structure is shown in the references.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is **(571)-272-7505**, and the number for fax machine is **(571)-273-7505**. The examiner can normally be reached on Monday through Thursday from 10:00 am to 8:00 pm. If it is necessary, the examiner's supervisor, **Sinh N. Tran**, can be reached at **(571)-272-7564**.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (**PAIR**) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

9. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is **(571)-272-2600**, or please see <http://www.uspto.gov/web/info/2600>.


SUHAN NI
PRIMARY EXAMINER

June 19, 2005